



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
SEMD/NYRB/WNYRS
Ted Weiss Federal Office Building
290 Broadway, NY 10007

New Cassel / Hicksville Groundwater Contamination Superfund Site (Eastern Plume)

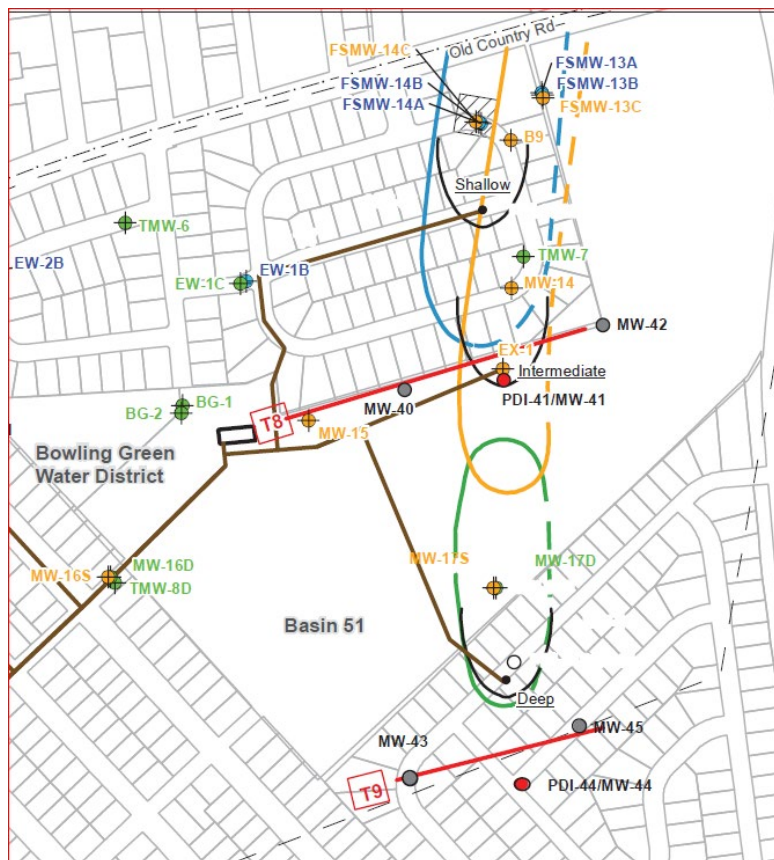
I. Amendments to Unilateral Administrative Order (UAO) Pre-Design Work Plan (PDI Work Plan or PDI WP)

As was discussed during the June 3, 2021 meeting between the Environmental Protection Agency (EPA) and Eastern and Central Plume Group representatives, EPA agrees to the following revisions to the well locations as outlined in Table 3 of the UAO PDI Work Plan.

1. Transect 7 (T7): Profile borings and monitoring wells along T7 shall be eliminated.
2. Transect 8 (T8): Install a profile boring and a monitoring well at PDI-41/MW-41 in accordance with the figure below. All vertical profile groundwater sampling shall include a sample at the groundwater interface, estimated to be approximately 40 feet below ground surface (bgs) and extend from 120 feet bgs to 520 feet bgs at 20-foot intervals. Depending on the results of sampling at PDI-41/MW-41, EPA will determine whether borings and/or wells will be installed at MW-40 and/or MW-42. EPA will be the final arbiter of this decision.
3. Transect 9 (T9): Move T9 200-300 feet south (from the original location) towards the bend of the road on Choir Lane in accordance with the figure below. Drilling south of the OU1 southern boundary (e.g., corner of Crystal Lane and Cameo Lane) is acceptable within 500 feet from the boundary. Install boring/monitoring well PDI-44/MW-44 on Crystal Lane and either PDI/MW 43 on Crystal Lane or PDI/MW 45 on the western half of Cameo Lane. All vertical profile groundwater sampling shall include a sample at the groundwater interface, estimated to be approximately 40 feet below ground surface (bgs) and extend from 220 feet bgs to 520 feet bgs at 20-foot intervals. The approximate new locations are displayed on the figure below. Once EPA is in receipt of the data from the two borings/wells drilled, EPA will determine whether the 3rd boring/well will be required. EPA will be the final arbiter of this decision.
4. All locations are subject to modification, with EPA's approval, based on field conditions.
5. All vertical profile boring analytical results will be provided to EPA in a timely manner to facilitate EPA's review and determination of the final well screen intervals.



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II. COMMENTS ON THE DRAFT EASTERN PLUME FIELD SAMPLING PLAN AND SITE MANAGEMENT PLAN

A. General Comments

1. Background information in both documents defines the term plume as having VOC concentrations greater than 100 ug/l. The 100 ug/l concentration is identified in the OU1 Record of Decision (ROD) for areas requiring active treatment and not considered the limit of the plume. Revise the definition of plume in all documents to reflect that the Remedial Action Objectives for Operable Unit 1 (OU1) require the restoration of the OU1 aquifers to drinking water standards.

B. Specific Comments – Eastern Plume Field Sampling Plan

1. Section 2.1: Reference to the Bowling Green water district supply wells should be updated to reflect that the wells are currently not in operation.
2. Section 2.2: This section states that subsequent groundwater sampling events indicate that concentrations of contaminants have decreased. This statement is not accurate for all of the wells. Revise the document accordingly.



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3. Section 2.4, Table 2: This table should summarize the cleanup levels identified in Table 7 of the OU1 ROD. Additionally, the total VOC concentration of 100 ug/l is not a cleanup objective and should be removed from this table.
4. Section 3.0: The Sampling Design and Rationale section should reference the PDI Work Plan. Sample locations and depths should be in accordance with this plan as modified by Section I above. Provide a figure showing boring and monitoring well locations in accordance with Section I.
5. Section 3.1: Delete "HydroPunch or PushAhead" from the first sentence, and add to the end of the sentence the following: "... to achieve the required depths in Table 3 as revised by EPA and data quality objectives as specified in the QAPP."
6. Table 3: This table should reflect the boring IDs, locations, sample depths, and overall boring depths consistent with the PDI WP and Section I above. Any deviations proposed should be noted.
7. Table 4: This table should reflect the monitoring well IDs, locations, and depths consistent with the PDI WP and Section I above. Any deviations proposed should be noted.
8. Section 4.1: Insert the following text, "Before drilling activities begin and prior to marking out utilities all locations shall be reviewed with EPA or their representative in the field. All locations shall be evaluated on whether there are conflicts (trees, overhead utilities, spatial constraints, etc.) that would require locations to be adjusted. No adjustments to locations will be permitted without EPA's prior approval."
9. Section 4.2, 6th bullet (page 10): Add another sub-bullet to indicate that the laboratory used for analyzing samples shall be approved by EPA.
10. Section 4.2, 6th bullet (page 10): Text should be added to describe the procedure that will be used in the event water does not enter the formation or the sampler is unable to be advanced due to tighter soil lenses.
11. Section 4.2, 9th bullet (page 10): Provide the location of and describe the security measures to be implemented for the storage of excess soil in either roll-offs or drums.
12. Section 4.2, last paragraph (page 11): Please amend the text to clarify that the only time when borings will not need to be logged will be when a monitoring well is installed directly adjacent to a borehole that had been previously logged and EPA has approved the well location without logging the boring.
13. Section 4.4: Amend this section to clarify that EPA will need time to review sample results before a final well installation depth is selected at each boring location. No wells may be installed without first receiving EPA's approval on the final depth. Depths noted for monitoring wells proposed along the exterior limits of the plume should also be reviewed and compared against results for vertical profile groundwater samples to verify that the depths still make sense based on the groundwater grab samples collected.
14. Section 4.5.1: This section seems to be mis-numbered and should be 4.4.1.



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15. Section 4.5.1, 1st bullet: Replace the word casing with borehole.
16. Section 4.5.1, 3rd bullet: Note that the minimum screen length will be 10-ft. Amend accordingly.
17. Section 4.5.1, 6th bullet: Text should indicate that keys shall be provided to EPA within seven days of the well being installed.
18. Section 4.5.1, last paragraph (page 13): Please provide preliminary design drawings as per listed specifications and cited standards. Please add the following: "Respondent shall provide EPA with the well screen interval identified in the design drawings for each location prior to the commencement of the well construction."
19. Section 4.5.2, last paragraph (page 14): This paragraph indicates that development water will be contained onsite. Is this referring to the boring location or will a separate off-site staging area be maintained. Clarify this in the text.
20. Section 4.5: Note that EPA will be performing PDI Directive 1 Round 2. Clarify whether Respondents intend to sample only newly installed wells or all existing and newly installed wells in the Eastern Plume. This Section shall indicate that if Respondents collect data from the permanent monitoring wells (existing and/or new), Respondent shall provide all such data to EPA.
21. Section 4.5.1: List of wells where water levels will be collected should be included in the text for EPA review and approval.
22. Section 4.5.2, first paragraph: Missing the word "wells" after monitoring in the first sentence.
23. Section 4.5.2, 1st bullet: While peristaltic pumps may be used for purging of the well, such pumps should not be used for VOC sampling collection.
24. Section 4.5.2, 4th bullet: EPA recognizes that deeper wells can have a significant volume of water, therefore purging of at least one well volume is not required by the Low Flow Guidance, and sampling can begin once the well has stabilized based on stabilized water quality parameters. Revise the document accordingly.
25. Section 4.5.2, 5th bullet: Water quality parameter stabilization requirements should be in accordance with EPA Low Flow Procedures: pH – ± 0.1 , specific conductivity – $\pm 3\%$, redox potential – ± 10 mv, DO – $\pm 10\%$, turbidity – $\pm 10\%$. Revise the document accordingly.
26. Section 4.5.2, 6th bullet: Pumping rate during sampling should be between 100 and 250 ml/min. in accordance with EPA Low Flow Sampling procedures. Modify the document accordingly.
27. Section 4.5.2, 9th bullet: Laboratory will need to be approved by EPA. Revise the document accordingly.
28. Section 4.5.2, 10th bullet: Wells proposed for additional sample parameters shall be identified in the Plan.



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29. Section 4.6.2: Any approvals by the Nassau County DPW to discharge wastewater into the sewers along with any supporting documentation will need to be provided to EPA prior to discharging any wastewater into the sewers. Revise the document accordingly.
30. Section 4.6.3: Replace the word "general" with "solid".
31. Section 4.7, Table 5: Peristaltic pumps should not be used for VOC sampling. Revise Table 5 to include alternative pump(s) consistent with U.S. EPA Guidance Low Stress (Low Flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells.
32. Section 4.7.1, Personnel Decontamination: Clarify what is meant by the term "onsite". Revise the document to include the location of the staging area, as well as the location of any areas of the Investigation Derived Wastes.
33. Section 5.0: Add a reference to EPA's PDI Work Plan.
34. Section 5.1 Pre-Field Work: Add a reference indicating that Respondents shall coordinate with the appropriate town(s) and local authorities prior to the commencement of any drilling and/or staging activities.
35. Appendices: The Pre-Drilling/Excavation Utility Checklist indicates hand clearing to 4-ft while the text indicates hand clearing to 5-ft. For consistency all instances referring to hand clearing of borings should be to a minimum depth of 5-ft in accordance with the text of the FSP.



III. Comments on the Draft Quality Assurance Project Plan (QAPP)

A. General Comments

1. It is noted that many tables, included in various Worksheets, are lacking the column headers. Please revise all such tables without headers throughout this QAPP.
2. It is noted that certain information is reported as "TBD", where such information should have been collected and/or determined prior to preparing this QAPP. For example, (not an inclusive list) Table 17-1 (page 30), the "Profile Boring" and "Rationale" and Table 17-2 (page 31) the "Monitoring Well ID" and "Rationale" are all listed as "TBD". Please delete "TBD" wherever it is used in the QAPP and provide the required information consistent with Part I above (revisions to Table 3).

B. Specific Comments:

The following comments reference the worksheets that present the information required by the UFP-QAPP guidance. If the information is present in the QAPP it will be so stated.

1. Project Management and Objectives Elements

a. Worksheet #1 & 2 – This information was provided in the QAPP and addressed the requirements.

b. Worksheet #3 & 5 – This information was provided in the QAPP and addressed the requirements.

c. Worksheet #4, 7 & 8 – It is noted that the presented table does *not* include fields/column for signature and date, as outlined in the UFP-QAPP guidance. Please revise to include signature fields, and the columns' headers. In addition, this worksheet should include a table for the laboratory personnel as outlined in the UFP-QAPP guidance. Please revise as appropriate.

d. Worksheet #6 – This information was provided in the QAPP and addressed the requirements.

e. Worksheet #9 –Please provide "Project Planning Session Summaries" as they occur prior to field activity.

f. Worksheet #10 – This information was provided in the QAPP and addressed the requirements.

g. Worksheet #11 – This information was provided in the QAPP and addressed the requirements.

h. Worksheet #12 – It is noted that the "Analytical Group" for all QC samples, except the TB, was listed as "All". Please note that the analytical group of the COCs (Contaminant of Concern), is VOCs. Please explain what is meant by "All" and revise as appropriate.

i. Worksheet #13 – This information was provided in the QAPP and addressed the requirements.



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j. Worksheet #14 & 16 – Please provide “Field Project Tasks and Schedule” as outlined in the UFP-QAPP guidance.

2. Measurement/Data Acquisition Elements

a. Worksheet #15 – It is noted that two (2) sets of standards were listed in this Worksheet (#15) --. New York State WQS, and EPA MCLs. Please revise the list to the most stringent Standard.

In addition, it is noted that the analytical group of Metals and Other were listed, but not discussed in previous worksheets such as in Worksheets #10 & #11. Please revise and list only analytical group(s) which pertain to this project. Groups need to be consistent throughout Worksheets.

b.. Worksheet #17 – This information was provided in the QAPP and addressed the requirements.

c. Worksheet #18 – Please add the column headers, and all specific information that is available.

d. Worksheet #19 & 30 – It is noted that some additional analytical groups were included in these Worksheets (#19 & 30) that were *not* discussed in previous worksheets in this QAPP. Please explain and/or revise as appropriate.

e. Worksheet #20 – It is noted that some analytical groups were listed in this Worksheet (#20), that were *not* discussed in previous worksheets in this QAPP. Please revise and list only analytical group(s) which are pertaining to this project. Groups need to be consistent throughout Worksheets. For example, 1,4, Dioxane is listed in Worksheet 15 under VOCs.

f. Worksheet #21 – This information was provided in the QAPP and addressed the requirements.

g. Worksheet #22 – This information was provided in the QAPP and addressed the requirements.

h. Worksheet #23 – This information was provided in the QAPP and addressed the requirements.

i. Worksheet #24 – This information was provided in the QAPP and addressed the requirements.

j. Worksheet #25 – This information was provided in the QAPP and addressed the requirements.

k. Worksheet #26 & 27 – This information was provided in the QAPP and addressed the requirements.

l. Worksheet #28 – This information was provided in the QAPP and addressed the requirements.

m. Worksheet #29 – This information was provided in the QAPP and addressed the



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requirements.

3. Assessment/Oversight Elements

a.. Worksheet #31, 32 & 33 – This information was provided in the QAPP and addressed the requirements..

4. Data Review Elements

a.. Worksheet #34 – This information was provided in the QAPP and addressed the requirements.

b.. Worksheet #35 – This information was provided in the QAPP and addressed the requirements.

c. Worksheet #36 – This information was provided in the QAPP and addressed the requirements.

d.. Worksheet #37 – This information was provided in the QAPP and addressed the requirements.

3. Other Comments

1. It is noted that all the Pace Analytical Services, LLC laboratory certificates expired on April 1, 2021. Please provide current valid certificates.
2. It is noted that Appendix C does not include the Laboratory's Analytical Standard Operating Procedures (SOPs). Please revise and provide such SOPs.